

back the universal ocean, and make it rise high over hills from which it had already receded. Not only had they to call up the vasty deep, but they had to endow it with rapid and even tumultuous movement, as it swept upwards over forest-clothed lands. Having raised it as high as their so-called Floetz formations extended, and having allowed its waters to settle and deposit precipitates of basalt and greenstone, they had to hurry it away again to the unknown regions where it still remains. This, forsooth, was the system that discarded hypothesis, and rested proudly on an irrefragable foundation of demonstrable fact.

In another notable respect the crudeness of the Wernerian system and its disregard of the most familiar facts in nature are shown by its classification of so many diverse kinds of rocks as chemical precipitates from a hypothetical universal ocean. Chemistry was then sufficiently far advanced to prove the absurdity of this dogma. Even if the ocean had been a mass of boiling water, it could not have held all these rocks in solution, and have deposited them as successive precipitates. But the Wernerian geognosts scouted the idea that the globe and its outer envelopes, ever had a high temperature. They seem never to have tried to reason out the chemical reactions involved in their theory of solution and precipitation, nor to have formed any conception of the causes which could have led to the successive deposition of the various precipitates. That the ocean could not have been a strong solution of mineral substances when the so-called chemical precipitates of the Transition Rocks were deposited, but must have had a composition